

ABSTRACT

A valve is disclosed having an inlet duct aligned with an outlet duct and an angularly oriented elliptical seat positioned between them. A pressure chamber faces the seat. A pivoting valve closure member is positioned between the pressure chamber and the seat. An asymmetrical rolling diaphragm is attached to the closure member and defines part of the pressure chamber. A seat engaging surface on the side of the closure member opposite the pressure chamber is sealingly engageable with the seat to close the valve. The valve closure member is pivoted into the closed position by pressurizing the pressure chamber. The valve remains closed against hydraulic pressure in the inlet duct. The valve is permitted to open by depressurizing the pressure chamber, allowing the closure member to pivot out of engagement with the seat. Fluid may then flow from the inlet duct to the outlet duct.